



# The College Board Review

FEBRUARY 1954

NO. 22

## THE COLLEGE BOARD REVIEW

News and Research of the  
College Entrance Examination Board  
Published three times a year by the  
College Entrance Examination Board  
425 West 117th Street, New York 27, N. Y.

### *Elected Officers*

Samuel T. Arnold	<i>Chairman</i>
Archibald MacIntosh	<i>Vice-Chairman</i>
Donald A. Eldridge	<i>Custodian</i>
Claude M. Fuess	<i>Custodian</i>
John I. Kirkpatrick	<i>Custodian</i>
William G. Ryan	<i>Custodian</i>
B. A. Thresher	<i>Custodian</i>

### *Executive Committee*

Archibald MacIntosh*	<i>Chairman</i>
Samuel T. Arnold*	Frank J. Gilliam
Mary E. Chase	Katharine E. McBride
Robert M. Cobbledick	Allegra Maynard
William H. Cornog	Albert E. Meder, Jr.
Finla G. Crawford	Edward S. Noyes
Matthew P. Gaffney	William K. Selden
* <i>ex officio</i>	

### *Appointed Officers*

Frank H. Bowles	<i>Director</i>
William C. Fels	<i>Associate Director and Secretary</i>
Henry S. Dyer	<i>Associate Director</i>
S. Donald Karl	<i>Editor</i>
Helen M. Gise	<i>Assistant Secretary</i>

The College Entrance Examination Board is composed of 155 member colleges and 23 member educational associations. Each member college has two representatives on the Board. Member associations have from one to five representatives. Members and their representatives are listed in the *Report of the Director*.

Copyright, 1954, by College Entrance Examination Board. All rights reserved. Printed in the United States of America.

## News of the Board

### Business meeting set for April 7

A full discussion of present and possible future activities of the College Board has been scheduled for the spring meeting of the Board in New York City on April 7.

Both morning and afternoon sessions will be devoted entirely to the consideration of Board business, a departure from recent meetings which have featured a symposium on problems of college admission in the morning period.

Among the important matters on which action will be taken are proposed amendments to the Articles and By-laws which would limit institutional membership to colleges which make regular use of Board tests. It is also expected that plans for the introduction next year of a financial information center for scholarship applicants will be presented for Board approval.

Information on these and other items which may be placed on the agenda by the Executive Committee when it meets on March 12 will be sent to representatives of the member colleges before the Board meeting.

### Ability, placement tests studied

Subcommittees of the College Board Committee on Examinations will meet in March to consider two important projects which were approved in principle by the Board at its fall meeting.

The tests of developed ability in the humanities, social sciences, and sciences will be discussed by one subcommittee with a view to coordination of recommendations made by the special committees which explored the possibility of developed ability tests in the three fields. In addition to members of the Committee on Examinations, the subcommittee includes the chairmen of the original special committees and the three chief examiners who will be responsible

for construction of experimental forms of the tests.

A second subcommittee will meet to consider progress in the advanced placement test project of the School and College Study of Admission with Advanced Standing, which this year will administer experimental tests to school seniors and college freshmen. This subcommittee was charged by the Board to study the results of the experiment, in association with recommendations of the School and College Study of General Education, and to prepare a statement of circumstances under which the Board could offer advanced placement examinations. The subcommittee will present its report to the Board at the next fall meeting.

### Scholarship service proposed

The possibility of a central financial information service to be used by scholarship candidates has been the first product of the study of scholarship conditions which was authorized by the College Board at its meeting in October.

A plan to establish such a service has been offered for consideration to colleges which have expressed an interest in improved methods of processing scholarship applications. The service, as outlined, would supply a uniform financial transcript which would be sent only to those colleges designated by the candidate. Additional possibilities would be the computation of the amount of aid actually needed by each candidate, and distribution to colleges of lists of common applicants.

### Publications receive awards

Two of the printed materials distributed recently by the College Board have been selected for exhibitions by printing industry associations.

The descriptive booklet on the Social Studies Test, which was published in October, was awarded a certificate of excellence for quality of design and printing in the Printing for Com-

merce competition of the American Institute of Graphic Arts. It will be exhibited in New York and other cities during March.

Both the booklet and the illustrated folder which announced the inauguration of the College Board publications subscription service last fall received special mention at the New York Employing Printers Association show in January.

### Dyer joins ETS as research head

The appointment of Henry S. Dyer, Associate Director of the College Board, as Research Vice President of Educational Testing Service was announced in January.

Dr. Dyer has been in charge of the Board's research activities since he joined its staff in October, 1952, and will continue in that post until July of this year. At Educational Testing Service, he is the first to occupy a position which was created as a result of the organization's expanding research program.

Formerly Director of the Office of Tests at Harvard, Dr. Dyer served earlier on the faculties of several schools and colleges. His contributions to College Board publications have included *College Board Scores: Their Use and Interpretation* and several *College Board Review* articles, the latest of which begins on page 413 of this issue.

### Candidates rise 22 per cent

The number of candidates who have registered to take College Board tests thus far in the current academic year is more than 22 per cent greater than the total for the corresponding 1952-53 period.

Figures for the two test administrations which have been held show an increase from 5,534 to 6,039 candidates in December, and a rise from 30,738 to 38,367 in January. Respectively, these represent gains of 9 and 24 per cent.

# College Admissions—Present and Future

Schools and colleges are faced with problems "startling in number, complexity, and size"—by FRANK H. BOWLES

This year about 2,000,000 young Americans will meet the first of four elementary requirements for college admission. In the language of the demographers, or what Will Cuppy might have called the populationologists, they will constitute the 18-year-old age group from which all the freshman classes will be chosen. What will happen to them in that process of selection, whether from natural or calculated causes, constitutes the problems of college admissions.

About half of the group will fulfill the second requirement for entrance, graduation from high school. Half of the high school graduates will have satisfied the third requirement by studying, or in any case following, a combination of courses which can be very loosely described as college preparatory. Slightly more than two-thirds of these will want, or at least be willing, to go to college.

The approximately 350,000 souls in the age group who meet these basic requirements will go to college with very few exceptions. Some will undoubtedly find it impossible, but only a small number of these will be able to cite financial reasons. Even the most impoverished high school graduate of today, if he does not have others to support, can have a college education in one way or another. Thousands of people who could not have attended college 25 years ago because of the cost are registered in the evening sessions of the great city institutions and thousands more are receiving scholarships for full-time studies. It is also true that very few will fail to gain admission for academic reasons, un-

less they are very dull indeed, for a determined high school graduate who can read and write almost certainly can find a college which is willing to accept him. There are many others, of course, who are not quite determined enough and who rationalize their lack of determination by speaking of money, family obligations, or military service.<sup>1</sup>

The 350,000 who will go to college may be further characterized as having a mean ability between 110 and 115 on the I.Q. scale. They are, in other words, a selected but not a brilliant group. They will include most of the really able secondary school graduates but far too many of the less promising students, for the mean I.Q. indicates that 175,000 of the group will be below 112 on that scale.

## THE TYPES OF COLLEGES

The hundreds of colleges which the students will enter may be roughly divided into three groups according to their functions in the admissions process. At the top of the pyramid there are about 50 institutions, most of them located in or near large cities, which offer superior facilities and instruction in a wide choice of programs. These are independent institutions, plus a very few state universities which act like independent institutions. They have an oversupply

---

<sup>1</sup> Of the age group of 2,000,000 about half are boys who will be liable for military service six months after their eighteenth birthdays. They will be required to serve, but may be deferred long enough to complete their education.

of applicants drawn from stable sources which include a large number of feeder schools. They are also characterized by a recruiting policy aimed at finding students of exceptional ability with the use of liberal scholarship funds, by a requirement of early application (usually in February), by the use of entrance examinations, by careful selection of admitted candidates, and by early admission (usually completed by May). These colleges attract a total of about 75,000 applicants who rank, for the most part, in the highest quarter of their school classes and who between them submit about 175,000 applications in order to be sure of finding a place. About 50,000 of the students are registered, many if not most of them after being admitted to at least two institutions. About 10 per cent of the freshman class is lost through various causes, of which downright failure is relatively infrequent. Better than 75 per cent of the admitted students are graduated.

The colleges in a second group numbering about 350 are not as large on the average as the top 50 and include a higher percentage of rural and suburban institutions. Predominantly independent colleges, they are characterized by a barely adequate and at times inadequate supply of students drawn only in part from stable sources. Their recruiting is intensive and continues until school opens with scholarships used fundamentally as a recruiting device, not just as a means of locating exceptional students. Though the students come in large part from the second and third quarters in ability of the secondary school classes, entrance examinations are not used regularly in spite of the fact that they are sometimes recommended and always mentioned in the college catalogues. These institutions attract a total of about 100,000 applicants including some overflow from the 75,000 applicants described above. About 125,000 applications are submitted by these 100,000 candidates of whom about 75,000 are registered. Freshman attrition is at the rate of about 20 per cent and from 50 to 60 per cent of the entering students are graduated. It should also

be noted that about 100 of these 350 institutions follow as closely as they can the philosophy and practices of the top 50, and that at least 25 of them can now very nearly qualify as members of that company.

The third and largest group, about 1,400 institutions, includes a number of struggling independent institutions which are usually very small, a number of urban institutions of the service type, and a great many tax-supported institutions. Their freshman classes have no fixed size, but are dealt with late in September according to the enrollment. They have no steady sources of students, but of course draw heavily upon the large urban and suburban high schools. These colleges indulge little in recruiting, have few scholarships except those occasionally awarded to athletes, do not select their students, require very little in the way of formal application, and close their rolls at the last possible moment, usually a week after classes have begun. Their students come from all four quarters of secondary school classes and do not take entrance examinations. They register about 225,000 from an application group which may be as large as 250,000 counting overflows from the other two groups of colleges. Freshman at-



In his introductory remarks to 300 school counselors at a meeting sponsored by Saint Louis University in December, Frank H. Bowles explained that his intention in preparing the paper from which the above article is taken was to offer a new treatment of the old topic of predicting success and failure in college. "However, regardless of what I meant to write," he said, "it turned out to be a discussion of the responsibility of school and college to face together, to analyze, and to resolve the problems of college admission." The relentless nature of these problems has been the subject of Mr. Bowles's relentless attention for close to 25 years of service as Director of University Admissions at Columbia until 1948 and Director of the College Board since then. During that time he has been a member of regional and national committees which "investigated every problem in education from accreditation of horticultural institutes to the declining birth rate."



trition is 30 per cent or higher and fewer than half of the entering students are graduated.

Only a few of the figures presented above are supported by research and most of them probably include a considerable error of estimate, but as generalizations they do serve the purpose of describing college admissions very roughly.

#### WASTED MONEY

Among the major problems which arise within that general situation, perhaps the first and most obvious has to do with the make-up of the 350,000 students who will enter college. One of the most striking things about this group is that 150,000 of them have not demonstrated the ability and do not have the capacity to do college work. This is implicit in the earlier statement that the mean I.Q. of the applicant group as a whole is between 110 and 115, from which it follows that about 175,000 of them are below 112 and about 150,000 below 110 on the I.Q. scale. By no coincidence at all the latter figure is almost precisely the number within any given freshman group that fails to finish college.

If we say 150,000 fast, it may not seem a large number, but translated in terms of colleges it becomes more impressive. It amounts to no fewer than 150 fully equipped colleges, each with a student population of 1,000, president, faculty, dormitories, classrooms, libraries, and laboratories. Each institution has 500 freshmen, 300 sophomores, 150 juniors, 50 seniors—and no graduates. There are alumni organizations, however, since an alumnus may be defined for fund-raising purposes as anyone who ever walked in the front door. Presumably they will have athletic teams, probably pretty good ones.

These 150 institutions do not exist as identifiable colleges, although a few barely escape belonging to that category, but their component parts are scattered among colleges throughout the land. They represent, in fact, nonproductive investments in education. Assuming a capital investment of \$2,000 per student, which is far below present costs, and an expenditure per student of \$400, which is low, this means unused



*These 150 institutions are not identifiable*

capital to the extent of \$300,000,000 and wasted expenditure to the amount of \$60,000,000 a year. In addition, family support of these students amounts to at least \$75,000,000 a year. This, be it noted, could purchase a lot of good education. It is a high price to pay for the slogan that everyone should have his chance.

#### WASTED TALENT

A second big problem revealed by the general admissions picture concerns those competent students who never get to college. As against the 150,000 who will be admitted only to fail, there are about 200,000 individuals of superior ability in the age group who will not go to college. The 350,000 group, it will be remembered, is composed of persons who have in common a desire, or at least a willingness, to attend college. The importance of the factor of motivation, when applied to this consideration of large groups, becomes all too apparent. The top quarter of the age group of 2,000,000, measured in terms of ability, consists of a group of 500,000 persons, each with an I.Q. of 115 or better and capable of good college work.

Of the 500,000 not over two-fifths, or 200,000, enter college. About 100,000 in the remaining 300,000 of the group do not finish high school. Of the other 200,000 who do graduate from high school but do not go to college, we know only two facts: that more than half of them are girls, and that many of them go on to some form of short-term schooling in preparation for employment. We do not know, however, *why* this large number does not go on to college. Sampling studies have shown that about half of them frankly do not care to go and that the other half, when pressed, talk about financial difficulties. When the financial problems are investigated, about half of them turn out to be serious, but there are very few, even of this type, that cannot be solved. Certainly these troubles do not appear to be any worse than those faced by many students who are in college. The essential problem, then, seems to be one of motivation, although it must be acknowledged that many in the ability group have no particular reason for going to college. The percentage of farmers' children attending college, for example, is the smallest among the higher income occupational groups, but the reasons for this seem quite obvious. The fact remains, however, that there are 200,000 able potential candidates whom we do not reach, and 150,000 actual candidates whom we would rather not reach.

#### DUPLICATION OF STUDIES

A third problem originates in the duplication and overlap between high school and college studies, a subject that has come into a good deal of attention through projects sponsored by the Fund for the Advancement of Education. Students who do their work well in secondary school often find themselves repeating in their required freshman courses, the materials they had already covered in the twelfth grade program. This is a triple loss, for it is a negation of high school efforts, a useless expenditure of student time, and a waste of college facilities. Studies now under way are trying to provide incentive and programs to eliminate this waste.

Although the suggestions that are being considered are not in themselves new, they have never been applied on a wide scale and have never been used with real success, perhaps because the problem has never before been seen so clearly. The reason that it is now being recognized and dealt with is, ironically enough, not an educational one. It originates in the fact that male students who meet the entrance requirements for college also meet the entrance requirements for military service. Because of this, it is to the interest of both college and student to get as deeply as possible into the college course before the student is called. There are good chances that under the present law, and the present administration of the law, that the student may then be deferred until he finishes college, and in some cases may even be permitted to finish professional school.

#### APPLICATION PRESSURE TO INCREASE

Having dealt at length with the present group of actual and potential candidates, let us consider the future. If we continue at the present rate and keep on doing the same things, we shall some time within the next 15 years find ourselves dealing with an application group of 700,000 instead of the present group of 350,000. Of this group we shall be admitting, only to lose them before graduation, some 300,000 individuals, instead of today's 150,000. To accommodate this group we shall have to exactly double the system of higher education. The only thing wrong with this statement is that if we continue to do things as we are now doing them, the job is flatly impossible. The support, the facilities, the equipment, and above all the teachers not only are not now available, but are not even a gleam in the eye of the most optimistic college or university president. Something comparable was done during the veterans rush, of course, and we are all familiar with the war time cliché: "The difficult we do immediately, the impossible takes a little longer." But if we are going to consider inspirational mottoes it might be better to remember one that a marine

colonel had erected over the pile of papers he was pushing around: "Think, there must be a harder way." The point is that the problem cannot be dealt with by either mottoes or history. It has to be dealt with by us and we had better begin now.

#### MULTIPLE APPLICATIONS

A fifth problem refers to multiple applications and competition for students. This is a serious administrative difficulty caused by the tendency of applicants to apply to the best institutions they can afford, and then to place other applications as a form of admissions insurance. It is the result of poor advice in both school and college, of the ease of making duplicate applications, and of faulty administrative practice in both colleges and schools. It is not really an educational problem, because it is not affecting standards in any except rather far-fetched ways, but it is a terrible nuisance and has to be recognized as such. Multiple applications certainly create one of the barriers to smooth administration of admission.

Having defined the controlling facts of admission and the most serious of the admissions problems, at least as they appear to the writer, we may now ask what can be done to improve this situation. The answer, perhaps a trite one, is that we had better start by using the facilities we have. After our present resources and operations are put in order, perhaps we can do a better job of planning for the future.

#### FINDING THE REMEDIES

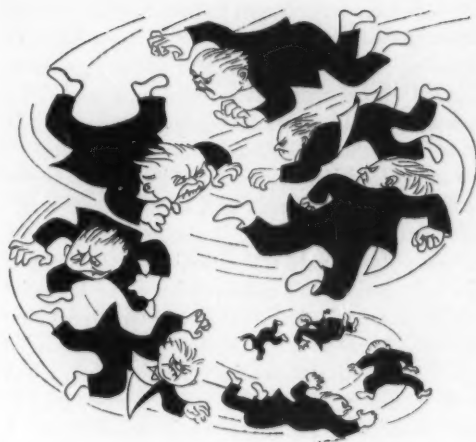
The first two problems relate essentially to poor use of resources and facilities. Both the 150,000 candidates who are admitted each year only to fail, and the 200,000 high school graduates of superior ability who never get to college, represent a net loss to higher education and to the country. In order to remedy this we must begin in the school and then carry the school's influence directly into the home and to the parents. Such action means, of course, a new role for the advisors and guidance officers, but

it is a role that school and community must accept if they are to look for a maximum return from their educational dollars. Ways of doing this kind of job have been tried out to a limited extent but they are outside the present pattern of operations in which advising usually occurs in the twelfth grade. If we are to do anything about influencing motivation, we must begin much earlier, probably in the tenth grade, for most of what is known about the making of decisions to go or not to go to college indicates that they are made and firmly fixed by the time the student gets to the twelfth grade.

In general the decisions are based on factors the school knows little about; often they are made through fear or ignorance of what college is. Counseling which is begun in the tenth grade should be general in nature, consisting of approaches such as comments on ability or exceptional work and conversations with parents about college plans. If this is done, by the time the student reaches eleventh grade a trial run can be given on the American Council on Education's Psychological Examination, or the Scholastic Aptitude Test, to give a definite measurement of the student's college potential. This should complete the worst of the advising job, leaving only the selection of a college to be done. An unanswered question, of course, is how this can be accomplished in a school where the guidance officer has no office to work in and who also teaches a full load and coaches glee club and debating. The fact is that this school has no guidance program and no guidance officer. The school which can support a three or four-year college guidance program with time, facilities, and perhaps a little money, has possibilities which are genuinely exciting and challenging.

The colleges, too, have a major responsibility in guidance and selection and must be ready and able to help a program which is directed at a group of tenth grade students. In addition, they must be ready to change their pattern of recruiting. Far too much recruiting is directed at the large urban and suburban high school in





*This sets up a vicious cycle of mediocrity*

the upper-middle-class residential areas, and far too little time is spent in the non-feeder schools. There are high schools, not only in the rural areas but in our large cities, that are never visited by college representatives and which produce able students who would go to college if the opportunity were brought to them. The colleges also have an obligation not to admit a student whose chances of success are negligible. Even a college which is trying desperately to fill a freshman class for budgetary reasons is hurting itself by admitting poor students, for this sets up a vicious spiral of mediocrity which results in inability to attract any good students and finally in inability to attract any students at all.

In the area of selection and guidance there are no panaceas or easy solutions. Success requires hard work, intellectual honesty, and careful attention to the individual. If we can do a better job by using these as our tools we will be taking the first step toward meeting the situation.

The third problem, duplication and overlap between school and college, involves a very

knotty matter—the customs and traditions of American education. These are all opposed to allowing college credit for work done in secondary school and even to some extent against excusing a student from any college work on the basis of secondary school achievement. Yet all of the proposals for dealing with this problem embrace one or both of these alternatives. The writer is prejudiced on this matter as the result of personal experience at Columbia where for 25 years students have been allowed to pass over subjects they know to get at subjects they do not know. A particularly striking case concerned a student who passed off his calculus and differential equations in the first week and registered for vector analysis as his freshman mathematics course. This student's degree requirements were not reduced because of his achievement; he still took the full 124 semester hours and he and everyone else felt that he had gotten the most out of his 124 hours. General adoption of some such pattern as this will probably be the first widely taken step in avoiding college duplication of secondary school work. It seems reasonable to expect that this will be followed some years from now by allowance of college credit for secondary school work.

#### THE READY, WILLING, AND ABLE

The studies and projects sponsored by the Fund for the Advancement of Education look toward the granting of academic credit somewhat sooner, or to acceptance of an alternate plan to admit students to college as soon as they are intellectually ready. These proposals, given the safeguards with which they have been worked out, have much to recommend them, but their general adoption is problematical. A pet scheme of the writer which is a good deal more radical would be to grant assurance of college admission at the end of the eleventh grade—something that given present tests and our knowledge of how to use them is perfectly practicable—and then let the student remain in secondary school to take an advanced program of the school's own making. This would

leave the question of schooling up to the school and the question of recognition up to the college. This division of labor would work pretty well and be less cumbersome than the present proposals, but its adoption cannot be anticipated. In any case, whatever is done needs to be done soon, for we must devise more economical ways of using college facilities if we are to take care of the population bulge which is now well on its way to high school.

#### PROBLEMS OF NUMBERS

This brings us to the question of how to handle the population bulge, a question which has no apparent answer. Unless facilities are increased this bulge can only mean that our colleges will be forced into a selective admission basis. There is, of course, room for considerable expansion in our colleges today, and there are in various stages of growth the beginnings of about 100 more colleges most of which will expand into four-year institutions. One of our great troubles, however, lies in the area of teacher supply, and as matters stand now, our graduate schools are not producing prospective college teachers at anywhere near the necessary rate. In fact, there are not enough good graduate schools to produce college teachers at the rate required to maintain faculties of double their present size. This means that unless there is some miracle not now foreseen, we will not be able to expand our freshman vacancies beyond 450,000. If we could do a first-rate guidance job in our schools, and this is a very large "if," the number of vacancies would be almost enough. But if we do not, then the colleges must handle the selection job alone and the results will be rather unhappy from a secondary school standpoint.

Finally we come to the problem of multiple applications and competition for students. The problem should not be underestimated but it does seem to be primarily an affair of educational bad manners all around. The colleges are greedy in grabbing for the best students and much to blame for bidding against each other

with scholarships and other inducements. The schools have an unhappy tendency to encourage multiple applications and to join in pushing the bidding for scholarships. The pupils appear to regard scholarships as a right and also as a prize, with the brass ring going to the student who can collect the largest number of offers.

In recognition of this situation a number of colleges have suddenly and simultaneously decided that the situation is getting out of hand. They will probably take drastic steps which will include placing all scholarships on a financial assistance basis only, which will be determined strictly on need and require that the size of grants be held confidential. Schools will be asked not to make any public announcement as to scholarships granted to their candidates. A movement is under way for a uniform scholarship application blank to be passed through a clearing house, with awards to be processed in the same manner. It may well be that applications for admission will also be passed through a clearing house. The approximately 85,000 candidates who take College Board tests for admission are filing an average of about 2.5 score reports, which represents a great deal of work for the colleges and the schools. Much of this is wasted effort because the standards of the Board member colleges are much the same, which means that a candidate admitted by one will be admitted by the others to which he applies and vice versa.

#### THE RESPONSIBILITY OF GUIDANCE

It would be rash, indeed, to go beyond these comments and prophecies. It is enough to indicate that the problems of college admission at present, and even more so in the future, are startling in their number, complexity and size. Most of them are being studied and worked on, but it is clear that some of the greatest burdens and responsibilities are going to be thrown on the school. Every guidance officer has a major share in molding the future and the sum of the individual efforts will in large part shape the course of higher education in our nation.

College counseling in the schools, from paper programs to full advisory services—by ROY B. BRIGGS

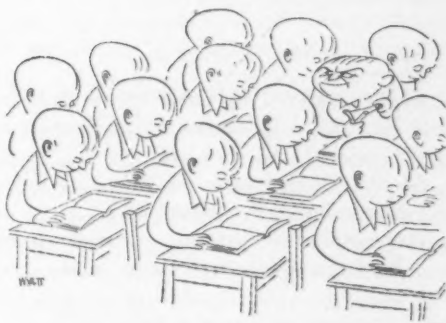
## What's Wrong With Guidance?

After nearly 50 years of awareness of the need for guidance and general acceptance of its value, why is it that so many students, today, are unguided or poorly guided?

To answer this question, the College Board engaged the writer to visit as many schools as possible in a semester and to observe the programs in operation. In the course of visits to some 70 public and independent schools east of the Mississippi whose students take College Board test, the writer concluded that guidance programs, while sometimes a model of what they might be, more often than not suffer from one or more of the following deficiencies, and sometimes from all of them:

1. Lack of administrative support.
2. Inadequately trained personnel who do not have the necessary time to devote to counseling.
3. Crowded and drab facilities.
4. Insufficient budgets for secretarial help, tests, books, pamphlets, college visiting, and other instruments of good guidance.
5. Lack of community understanding and support.

The redeeming feature of most programs observed, however deficient, was the enthusiasm with which counselors accepted their responsibilities. Often laboring under staggering difficulties, these men and women were uniformly selfless and devoted to the young people they were serving. Sometimes working in their lunch hours and after school, often paying for ma-



*Individual talents should be identified*

terials and college visits out of their own pockets, they exhibited an infectious zeal for their important work.

The guidance programs observed range from full-scale, all-out efforts which are unfortunately rare, to paper programs with all the above deficiencies plus the cardinal fault of self-deception.

What is a good program? Imagine a comprehensive high school with an enrollment of 1,200 in an average city. What makes the guidance in this school effective?

The local Board of Education believes that good guidance identifies each student as an individual and that such a program advises him according to his particular abilities. This attitude is reflected in practice by informed and able school administrators and the faculty.

The guidance department in the school has four full-time counselors with professional

training and a full-time secretary. Additional part-time personnel include remedial teachers, especially for reading, a psychologist and a psychological tester. The services of a mental hygiene clinic are also used for certain pupils.

The testing program includes Mental Ability, General Achievement, Special Aptitude, Interest, and Personality tests. These are administered prior to the times when students are advised in their choice of studies according to their aptitudes and abilities.

The following program is used:

### Records of entering students

### Skills measured by achievement tests in Reading, English and Social Studies in Grades IV, VI, and VIII

**Mental Ability tests administered three times during first eight years**

Anecdotal and cumulative records from kindergarten through Grade VIII

### Measurements during High School

**GRADE IX:**

### English battery giving measurement in Reading, Mechanics, and Effectiveness of Expression

## Algebra Aptitude in September to all Two Personality tests

**GRADE X:**

**Mental Ability test to all**  
**An Interest test to all**

**GRADE XI:**

## English battery administered again

**GRADE XII:**

**Mental Ability and Aptitude tests of the State Employment Service to all not definitely going to college**

The total curriculum is available to all students. This school believes that students should



*The suite's attractiveness is important*

be offered a wide choice of subjects which continuously challenge their ability. This requires homogeneous grouping early in the high school program.

Desirable physical facilities include a browsing room in which students find readily available materials relating to colleges and vocations. Private offices for counselors open from this room. The comfort and attractiveness of the suite are of paramount importance.

The reader may now be asking, "And how much does all of this cost?" In terms of its essentials, the expenditure will probably total less than \$25,000, including the four counselors at average salaries of \$5,000, a secretary at \$2,000, and \$1,200 for such materials as tests, pamphlets, and vocational information. This cost represents between one and two per cent of the budget required to maintain our hypothetical high school of 1,200 and the elementary schools through Grade VIII which supply its student body.

At the other extreme, schools which operate with "paper guidance programs" find it as diffi-

cult to do effective guidance as nations do to maintain paper blockades in time of war. People who are given the title of counselor and have no school time set aside to work with students are handicapped from the start. For example, the principal of one school apologized because his counselors were not available to describe their work. The reason for this, he explained, was that in a six-period day each counselor taught five classes and was also assigned to one study hall. This school uses an outside agency to test all pupils in a comprehensive testing program, but has no one available to study and apply the results of the tests. In other schools the "counselors" have so many administrative duties that very little time is available for individual conferences with the students. The single counselor of one school of 800 has as his goal "to see each student at least once before he graduates." Considering his many additional administrative duties, it will be a miracle if he accomplishes even this.

One of the many vice-principals who serve as directors of guidance said his administrative duties took so much time that he had virtually none for individual counseling. "It is pretty difficult," he pointed out, "to discipline a boy one day and then meet him the next as his friendly counselor. The students find it difficult to adjust to my varied roles." The guidance director in another school is responsible for all visual aid materials and teaches driver training as well. Even so, he feels his status is better than that of his predecessor who had the additional duties of attendance and discipline officer. This director's school, which has an enrollment of over 600, maintains a fairly complete testing program, but does not allow him sufficient time to study and make best use of the results. A failure to apply data early and effectively is not uncommon. In fact the goal of too many schools seems to be the gathering, not the use, of test data.

Another school with an enrollment of over 1,500 situated in the shadow of a state university sends perhaps 90 per cent of its college-

bound graduates to the university. This school has four teacher-counselors who can devote only one period of a day to counseling, and who work on the basis of a single test result. One wonders how this university can meet the needs of all comers equally well and whether better counseling might not encourage some of the students to go to other colleges. Perhaps the most pathetic example of a paper guidance program is in a school of 1,200 in which one person, saddled with all the responsibilities of counseling and its clerical work, also teaches five classes every day. Students must use their lunch hours to receive any "guidance" at all.

#### THE IN-BETWEEN PROGRAMS

Between the schools which have complete programs and those which counsel on paper only, there are many schools which use a variety of guidance methods. Among those schools whose staffs do not include full-time, trained counselors, many are doing effective work through the administrators or the teachers.

Characteristic of the small public high school and independent secondary school is the administrator-counselor who has the special advantage of knowing the students and their backgrounds. In addition to being well acquainted with his students, the independent school headmaster makes it his job to be fully informed about college offerings and require-



*Paper programs make guidance difficult*



ments, a practice which many public school people would do well to imitate. Advice based on partial or faulty information, when all the facts are readily available from the colleges, turns guidance into a game of "blind man's buff."

#### TEACHER-COUNSELORS

In other schools, teachers often double in brass as guidance officers. In some cases, home-room teachers who may or may not stay with a group for the entire four years, handle the routine matters of scheduling courses and ironing out minor student maladjustments. Usually, however, they do not have time for individual college counseling. In a variation of this pattern followed by some schools, teachers are given one or more periods exclusively for counseling, often under the direction of a full-time guidance officer. Many administrators feel that the teacher-counselor system is superior, particularly in small schools, to the use of a trained guidance staff, pointing out that it encourages an understanding and appreciation of educational aims which should be shared by the entire faculty. In some cases, of course, the choice is determined by the budget with the difference between effective and ineffective guidance being made up by the enthusiasm of the administrators and teachers. One danger resulting from dependence on faculty members who have spe-



*Diagnosis is a necessary first step*

cialized interests and have not been taught to sympathize with the overall purpose of guidance was acknowledged by a principal who said, "The departmental chairmen do not necessarily concern themselves beyond their subject field. We need more than this if we are to do a real job for the student."

#### THE GOOD PROGRAM

It is obvious that guidance programs differ greatly in form and quality today and probably will continue to do so in the millenium. It is equally apparent, however, that all good programs share important characteristics, whatever the school's size or budget. A good program will recognize that:

1. Guidance can be effective only when the teacher and administrators have become enthusiastic advocates of the point of view that pupils are individuals with individual differences.
2. Diagnosis is a necessary first step in the broad field of pupil guidance. To this end, tests should be used and cumulative records should be kept and consulted regularly, particularly at those key points in the student's program when he is obliged to make choices to fulfill his abilities and aims. Since students are not able to diagnose and understand their own needs and aptitudes, the testing program is not an end in itself, but an aid to the realization of the overall objective.



Roy B. Briggs was a social studies teacher and student counselor at Roger Ludlowe High School, Fairfield, Connecticut, when he received a leave of absence to join the College Board as its Visiting Representative during the winter semester. He returned to Roger Ludlowe and the duties of full time guidance officer in February. The time between was spent in calling on big and small independent and public

schools throughout New England and New York, as well as in the South. In each, Mr. Briggs answered questions about the Board program and sought information on current guidance policies and practices.

3. A trained counselor should be available. Teachers without specialized training are not necessarily qualified to interpret test results and advise students. Where the size of the school and its funds permit, psychiatrists and specialists in tests and measurements should be consulted.
4. The counselor should spend a great deal of his time with the teachers for both can benefit by sharing their knowledge of the needs and abilities of their students. The classroom teacher is the greatest single factor of motivation to a student and the counselor will do well to spend as much time discussing Joe as an individual with the teacher as he does with Joe himself.
5. Labeled curricula, such as College Preparatory, Commercial, and Industrial Arts, are often so tightly interpreted as to make it impossible to develop the abilities and meet the needs of individual students. Counselors should work toward flexibility in studies to encourage each student's full development.
6. An alumni follow-up program is necessary to determine how well the program of the school has met the needs of students.
7. Time and money should be available to the counselor for visits to college campuses. He needs to have specific knowledge of the colleges that the graduates of the school attend and of available financial aids.
8. A public and community relations program is essential to the development of understanding of the school's guidance program. This can be done through Industry-Business Education Days, the use of local people as speakers, or in other ways that will give taxpayers an active interest in the things their school is trying to accomplish.
9. Counselors will look forward to the near future when college admission will become much more difficult. They will work toward the full adjustment of students,

encouraging those who have the ability to go to college and advising others to enter areas that will lead to a happy adjustment with their abilities.

10. Counselors will start early to help the student define his objectives. Often, this will include advisory work with parents.
11. Guidance is an essentially personal relationship between counselor and counselee and should be conducted in attractive and comfortable surroundings. Reference books and informational materials should be available. Partially walled-in offices, for example, do not afford satisfactory surroundings for private interviews. The guidance office should be brought up from the cellar and painted a color other than the "conventional" drab brown.
12. Dollar costs are weighed against human costs. To avoid the hidden costs of wasted talent, the direct costs of good guidance must be accepted.

#### COLLEGES CAN HELP

It is all too amply clear that most schools need to face head on the improvement of their guidance programs. It remains to say what the colleges can do to help them. According to the counselors, if the colleges want to assist in developing better guidance they should:

1. Make as clear as possible the nature of their programs and entrance requirements. In many cases college catalogues do not give the vaguest idea of the requirements and sometimes actually misrepresent them. Reports of the freshman class accepted the previous year, including normative data which show the range of performance presented by successful candidates, would be very helpful.
2. Understand and be able to use guidance instruments employed by schools, such as tests and measurements, cumulative record cards, and associated materials which are available.

3. Learn as much as possible from the school counselor about the candidate. Advice shared early can often smooth the candidate's preparatory path to the appropriate college study program.
4. Meet applicants individually at the school. College Nights should not attempt to be more than a general forum on problems of college entrance. Two or three-minute interviews with hosts of half-serious candidates in carnival surroundings cannot be considered guidance.
5. Assist rejected candidates, insofar as time and budget will allow, by helping them to make choices appropriate to their talents, in or out of college.
6. Help schools to develop their guidance programs by providing them with records of their graduates' performance in college.
7. Invite guidance officers to visit the college and learn at first hand the demands which it places upon students.
8. Work toward the elimination of competition between colleges in admissions and scholarships—and toward cooperation.

#### POSSIBLE COLLEGE BOARD STEPS

School people also believe that the College Board can contribute to the development of good guidance. Implementation of their recommendations would involve:

1. Consideration of the admissions process not merely as a transition that starts at the senior year of high school and ends at the freshman college year, but as a continuous process which gains momentum through the school years and is not concluded until graduation from college.
2. A more definite policy toward preliminary testing. Use of the Scholastic Aptitude Test in the junior year is at best spotty and its application to guidance is no clearer to the schools than it is to the Board. The conditions under which preliminary testing is useful should be determined.

3. Publication of informational materials on preparation for college. Materials prepared for students in the freshman and junior years of high school would be especially helpful.
4. A study of guidance techniques by the Research Committee to determine their relative value.
5. Recognition by the Committee on Examinations that the Board tests, particularly the Scholastic Aptitude Test, are used not only for admissions but for guidance and that the usefulness of the tests for both purposes should be kept in mind.
6. A special committee on guidance to explore possible Board services which would assist schools.

#### CONCERTED EFFORT NEEDED

Improvement in guidance is needed to correct the situation in which so many able students do not go to college and so many unqualified students do go only to drop out. This will require a concerted effort by every institution and organization interested in effective guidance of the nation's youth.

#### Memo to Guidance Officers

At least one reader of the *College Board Review* still believes that the function of poetry is to hold a mirror up to nature. He offers the following shrewd advice to all students eager to enter college and all advisers eager to place them:

*The candidate eager for college admission  
Who fears that his chances are slim  
Should realize that somewhere a college  
admission  
Office is eager for him.*

Anon.

# Research Goals of the College Board

The testing of tests, for purpose, utility, and improvement is essential—by HENRY S. DYER

This year the College Board will spend about \$150,000 on research. Some of the money will go for research on theoretical problems connected with testing in general; the rest will be used to pay for the investigation of practical problems growing out of the Board's own program. How is the expenditure justified? And what sorts of things does it buy?

The College Board was founded for the purpose of conducting a college entrance examination program that would, as far as possible, embody academic criteria useful to all colleges in the selection of students. This is still its main reason for existing. Members of the Board are committed to the idea that tests controlled by themselves are indispensable to the admission process.

Tests are powerful instruments, especially when used in helping to decide who shall go to college and where. Depending upon their quality and the way the results are used, tests can help or hurt a great many people. They play an important if not a decisive part in determining the quality of the college population. To some extent they affect the structure and the content of the secondary school curriculum. In most cases they furnish the only tangible connection between the intellectual demands of college work and the intellectual activity of the high school.

In these circumstances it is clear that the Board has an obligation to make sure that its tests are adequate for their purpose, that appropriate information is available for proper



*A good risk in one college may be a poor risk in another*

interpretation of the test results, and that there shall be a continuous effort to improve the tests and the quality of the data affecting their use. The aim of the Board's research program is the fulfillment of this obligation.

## TEST PURPOSE AND ADEQUACY

If a test is to be adequate for its purpose, the first task is to clarify the purpose—and this is not as simple as it sounds. College Board tests are expected to differentiate between students who are capable of good college work and those who are not. They must also recognize the fact that colleges vary, that a student who is a good risk in one may be a poor risk in another. Furthermore, in sorting out the more able from the less able candidates, it is important that the tests shall be equally appropriate for students from public and independent schools, from

eastern schools and western schools, from conservative schools and progressive schools.

Clarification of the needs that the tests are supposed to fill is one form of research, a mundane kind which makes up in importance what it lacks in excitement. It involves questionnaire surveys which find out what the colleges want and what the schools are doing, and which yield information that provides particularized and useful knowledge for the test makers. It also involves trying out tests on sample groups of students to see whether the questions are appropriate for the College Board population as a whole. Pains-taking analysis of these trial runs shows how difficult each question is in terms of the number of students able to answer correctly, how well it separates the more able from the less able, and how efficient the so-called "distractors" in each question are in luring the unwary away from a correct response. Although analyses of this kind have become so routine in the test construction process that they are scarcely thought of any longer as research in the formal sense, the information they supply is essential. It provides assurance that the material in every test will in fact be suitable for appraising the candidates to whom it is offered in the regular examination program.

Statistical research aimed at controlling the quality of the tests does not stop with the trial runs. After a test has been given to college

applicants it undergoes rigorous statistical evaluation which shows whether the test as a whole worked out as expected, whether it contained a proper balance of easy, medium-difficult, and difficult questions, whether its length was suited to the time allowed, how well different sections worked, and how much confidence can be placed in the stability of the scores. This statistical evaluation, also a routine procedure, is practically indispensable in a continuing program as a guide to the construction of each succeeding test.

Routine analyses, however, are incapable of telling us all that we need to know about the adequacy of the tests. We must know also how accurately they reflect high school performance and how well they predict success in different types of colleges. This kind of information is the product of validity studies, which require cooperative work with certain schools and colleges. The findings from such studies, considered individually, do not have general applicability. They may show how a specific test or group of tests function for a particular college, but they do not guarantee similar results at another college. Nevertheless, enough validity studies have now accumulated to provide considerable assurance that for most colleges the tests can be a considerable factor in improving the selection of students. Within limits dictated by financial necessity the Board is always willing to cooperate with any college that wishes to work on a validity study, and usually has two or three in progress. More work of this general character is needed in the secondary schools, however, so that we may know better than we now do the degree to which the examinations are testing the same things teachers are trying to teach.

#### USE OF THE SCORES

A test may be perfectly adequate for its purpose, but do little good and even considerable harm if people who receive the test scores do not understand them. The Board attempts to teach test users how to read the results of the



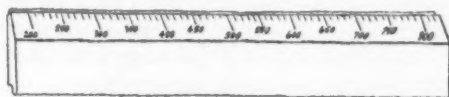
Henry S. Dyer occupies three positions these days—Associate Director of the Board, Research Vice President of Educational Testing Service, and a seat on the express which runs between Princeton and New York. In July he will abjure these schizophrenic pleasures by leaving the Board post to devote full time to ETS's expanding research activities. His present situation could hardly be called a marriage

of convenience, as far as Dr. Dyer is concerned, but the parents of the agreement certainly feel that some such relationship is involved. The only problem it presents to ETS and the Board—on alternate days—is that of deciding whether they have lost a son or gained a son-in-law.



tests correctly, partly through its publication program and partly through research which provides the data necessary to make a test score meaningful.

Few people outside the testing field have any idea of the difficulties involved in producing a test score that will make sense in the large variety of situations in which it may be used. It is, in fact, the very innocence of the general public that makes the problem so complex. Any one who has dealt at all with College Board tests knows by now that the scores come in the form of standard ratings, the lowest of which is 200 and the highest of which is 800. This is the College Board Measuring Stick, and no doubt, many people picture it in their minds as similar to any other measuring stick, something like this:



*College Board Measuring Stick*

There is really nothing wrong with this picture except that it suggests a neat and beautiful simplicity in the Board's standard rating scale that does not in fact exist. Behind the intervals on the scale is a long series of complicated equations based upon interesting statistical and psychological theory—some of which is debatable—and upon thousands of test records turned in by thousands of candidates each year. The task of producing and maintaining a satisfactory test scale which can be applied in the same straightforward way as a yard stick and have the same meaning from student to student, from test to test, from year to year, is as fascinating to statisticians as any problem psychometrics has to offer. It occupies the attention of a corps of mathematicians between the time the tests are turned in and the time the scores are reported. The result of their work is a scale for each test that *approximately* meets most of the demands that are placed on it. More research is needed, however, and it is going on. It is still

wholly improper to say that a score of 800 is twice as high as a score of 400. Those who find this difficult to believe are advised to take another look at the picture!

The complexity of the scaling problem really grows out of the complexity of the thing we are trying to measure, namely, human performance. How a boy habitually conducts himself in the presence of mathematics problems is not so easy to specify as his height or weight. What we do, essentially, is resort to comparisons. We say that John does better than Joe. This tells us something about John and Joe, but usually we want to know more than that; we want to know how John stacks up with all the boys who are candidates for engineering school, or the eleventh grade candidates in public schools, or the freshmen in men's colleges. In other words we want *norms* of various kinds to help us interpret the scores that come off the standard rating scale. This collection and organization of normative data is necessary if the scores on College Board tests are to be as meaningful as possible to the users. The systematic collection of such data at regular intervals accounts for a sizable amount of the Board's research budget.

#### EXPERIMENTING WITH IDEAS

From the researcher's point of view, and probably from any other point of view, the most interesting research is that which pushes toward the future in the hope of progressing from the adequate to the better than adequate. Ever since the 1920's, when Carl Brigham began work on the Scholastic Aptitude Test, the College Board has been searching for new and better tests to forecast college achievement. The most recent study<sup>1</sup> of major magnitude was an investigation to see whether the predictive power of the SAT could be improved by adding questions of types radically different from those

<sup>1</sup> Henry S. Dyer, "The Scholastic Aptitude Test—Items, Scores, and Coaching," *The College Board Review*, November, 1951, pp. 235-239.

already in the test. The outcome has been less exciting than were the early prospects. One new type of question appears to improve the test a little, but whether it can be justified in the long run as a regular addition to the test, or possibly as a separate test, is open to question.

Another study which caught the imagination of many people when the plans for it were first announced had as its goal a test to measure the motivation of college students.<sup>1</sup> A large number of entering freshmen in two colleges took the test experimentally and the results were combined with their scores on the regular Board tests to see whether the motivation scores would add anything to the predictive power of the combination. The theory was that some students do better than expected and others do worse than expected because of differences in motivation. The hypothesis was that if the new test really measured motivation, it should increase the accuracy with which freshman grades could be predicted. It did not.

A predecessor of the motivation test study was one which sought to improve the prediction of college success through the use of autobiographical data.<sup>2</sup> This, too, failed to produce anything useful.

Generally speaking, recent efforts to find new material that would be useful have turned up rather lean results. Some people take this to mean that we have just about reached the upper limit of what can be accomplished with tests. Others feel that there are still many hypotheses that should be tested out before closing the door on the possibility of further improvement. Still others refuse to take the current findings at face value. They seem to have the attitude that if the original theory was good enough to warrant a fairly heavy expenditure in time and money, the theory *must* be good,



*Motivation was combined with Board scores*

and if the findings don't support it, so much the worse for the findings.

This last attitude, of course, is not the attitude of research at all. But it is one that must constantly be guarded against, for there seems to be some tendency among people engaged in various forms of educational research to commit themselves in advance to positive findings, and then, if the findings are not positive, to reject the findings rather than the hypothesis. This unfortunate tendency accounts, at least in part, for the fact that a lot of the educational research that gets published is not very helpful in promoting better procedures. Of course, there are some cases where the findings of a study may be erroneously negative because of a mistake in method, but such an occurrence is rare. What is more common is to commit an error of method, or of inference, which makes the result look better than it really is—and then to become emotional in defending it.

It must be recognized that research into new territory cannot, by its very nature, yield results that are guaranteed in advance. Even with the most careful planning based on past work and hunches that seem highly promising, the batting average in positive results is likely to run pretty low. This is true of any kind of research, and it is particularly true in test research where many of the concepts with which

<sup>1</sup> John V. Gilmore, "A New Venture in the Testing of Motivation," *The College Board Review*, November, 1951, pp. 221-226.

<sup>2</sup> R. C. Myers and D. G. Schultz, "Predicting Academic Achievement with a New Attitude Interest Questionnaire, Part I," *Educational and Psychological Measurement*, Vol. X, 1950, pp. 654-663. D. G. Schultz and B. E. Green, Jr., "Predicting Academic Achievement with a New Attitude Interest Questionnaire, Part II," *Research Bulletin of the Educational Testing Service*, 51-5, February, 1951.

we deal are still very fuzzy, however much we may try to clarify them.

The research program of the Board is founded on the necessary proposition that we must try out as many new ideas as possible, under rigorous conditions for proving their worth, if we are to move toward new tests that are genuinely more useful in one way or another than the present tests. We have to acknowledge that many of the new ideas, however appealing they may seem at the outset, will not pay off, and that the money spent on investigating any particular idea is not likely to yield any tangible return in the form of new testing devices. The money so spent is nevertheless well invested if the idea with which the project began was well thought through in advance and if the methods used for investigating it were sufficiently rigorous to give a clear-cut answer. It is important to know exactly where the blind alleys are so that they can be avoided in the future.

One large project now in progress will illustrate this point. Called tests of developed ability temporarily, in essence the idea is to identify those abilities which are important for successful college work in three areas—the humanities, the social studies, and the sciences—to discover whether and to what extent these abilities can be developed in secondary school, and to devise tests based upon them.

We start out with a series of *experimental* tests, each to be worked out with as much thought and care as we can summon from the experts in each area. These tests will be given both to high school and college students for the purpose of testing several hypotheses. Roughly stated, the more important of these hypotheses are: (1) that the abilities required in each area are identifiable and can be tested, (2) that they can be developed in secondary schools under varying conditions involving differing patterns of subject matter, (3) that the tests can be made to provide reasonably accurate measures of the amount of each ability that the high school senior has, and (4) that these measures will provide predictions of college success in

each area sufficient to warrant the use of the tests in selecting students for admission to college and in advising them with regard to the area in which they should concentrate.

All of these hypotheses represent "bright ideas." None of them has as yet been proved. Every one of them can turn out to be a flop. In a sense, the task of research is to design the project in such rigorous fashion that every one of the hypotheses will have an opportunity to flop, if in fact it is false. It may be that the abilities we are talking about are not identifiable or testable. It is possible that the best teaching in secondary school makes no difference in the degree to which they develop. Maybe it is impossible to devise tests that will measure such abilities with any useful accuracy. Or maybe, even if all our previous ideas work out, it will still not be possible to predict differentiated achievement in college with the tests devised. If such negative findings are in the cards, we certainly want to know it before we become committed to any major change in the College Board testing program. If the original bright ideas with which this project started turn out to be not so bright after all, then we must have sufficient scientific objectivity to accept the fact and to move on to other bright ideas. In the research business an ounce of skepticism is worth a thousand pounds of enthusiasm, and we must always be on the watch not to be taken in by the enthusiasts.

This is not to say that a fertile imagination and the urge to pursue new ideas is to be deplored. Quite the contrary. If the College Board program is to become better than adequate, if it is not to bog down forever in the status quo, we need all the new ideas we can get and the will to explore them with all the energy we can muster. Our only limitations in this respect should be the amount of research funds available and the number of competent researchers willing to work on the problem.

Some of the new ideas we are after are concerned not so much with ingenious testing devices as with novel methods of using the devices

and observations already available. We need to dream up new ways of relating and combining all of our observations on students—their school background, interests, stated goals, classroom behavior, intellectual growth over the years, as well as their entrance test scores—in order to find indices that will enable us to take account of all phases of an individual in judging his past performance and future possibilities. This search for new and useful relationships gets us into some complicated mathematical problems, many of which are not yet solved. Consequently, part of the research supported by the Board is necessarily mathematical.

#### GENERAL RESEARCH

It was mentioned above that test research is apt to be slow in producing positive results because the concepts involved are fuzzy. We have trouble getting rigorous definitions of such terms as “score scale,” “comparable tests,” and the “difficulty” of test questions. Common notions concerning ability, achievement, motivation, creativity, and the like can mean different things to different people, including psychometrists. Research directed at the clarification of these concepts and at their organization into consistent, testable theories is basic to any fruitful test development. The College Board supports this research by turning over a fixed proportion of its income for “general” research at Educational Testing Service.

Some people have trouble understanding the utility of this kind of research. It is often heavily mathematical and apparently far removed from the practical problems that bedevil the test maker and the test user day in and day out. At times it looks like a refinement upon a refinement that nobody but a highly trained mathematician can properly understand.

There is some truth in the idea that communication between the theoretical researchers and those faced with problems of everyday practice is not all it might be, but this does not affect the importance of theoretical research. Psychometrics is still a fairly young science, and it is

dealing with extraordinarily complex phenomena, in fact, probably the most complex there are—the behavior of people. It is still groping toward some mathematical formulations of theories that will not only be self-consistent but will also fit enough of the facts of life to be useful. But why is it necessary to insist on mathematical formulations? Why will not ordinary verbal inference serve the purpose just as well? Why do we have to “quantify” everything?

The answer is that verbal inference cannot serve the purpose just as well because it is simply incapable of comprehending the data in all their complexity. To express a concept or to state a theory in terms of mathematical expressions makes possible the exploration of the consequences to an extent that is well beyond the scope of verbal inference. This does not mean that in a crude sense we have to “quantify” all human behavior before we can deal with it intelligently. It means only that our observations of behavior must be so organized and classified that the full rigor of mathematical inference can be applied to them. It is altogether likely that until the mathematics of psychometry has been developed to the point where it *can* apply to the observations at hand, we shall continue to go around in circles so far as any really important progress in testing and the use of tests is concerned.

The chances of breaking out of the circle are fairly promising. The mathematicians have become interested in our problems. We are learning to state the problems in a form that permits us to put them on some of the new high-speed electronic computers, so that some of the relationships which we have been unable to explore in the past, because of their extreme complexity, can now be dealt with in an expeditious fashion. We shall in consequence be able to know more promptly the lines of reasoning that lead nowhere and the lines of reasoning that will lead to better methods of appraising people and their possibilities not only as college students but as persons as well.



The ways and means of sponsored financial aid programs for talented youth—by ARTHUR L. BENSON

## Scholarships, Incorporated

In observing the growth of sponsored scholarships in recent years, colleges have shared some of the feelings with which drought-stricken farmers greet the appearance of a dark cloud on the horizon. Both wonder how large the cloud will become and which way it will drift. Both are willing to get their feet wet in order to see the silver lining.

One index of the increasing number of scholarships sponsored by industry, labor, civic and service organizations is represented by about 50 programs which use College Board test scores in their selection procedures. These programs, totaling some 500 annual scholarship awards with a value of about a quarter of a million dollars, also compose an interesting cross section of the purposes, sizes, and administrative procedures involved in this newest and often

highly enlightened form of investment in youthful talent.

Some of the programs loom large in the plans of the youth they serve and are important to the colleges which these students most commonly attend. The Ford Motor Company Fund annually awards 70 college scholarships to sons and daughters of the company's employees. Baptist high school seniors can compete for up to 60 scholarships given annually by the Board of Education of the American Baptist Convention and cooperating colleges. The Educational Funds for Children of Phillips Petroleum Company Employees offer 50 scholarship opportunities each year to young members of its "corporate family."

These are exceptionally large programs. Their influence raises the average number of annual awards per program to about 10, although a more typical number is six or seven and many sponsors find it desirable or necessary to make only one or two awards annually. However, there has been a marked trend in recent years toward expansion of the number of scholarships awarded, particularly in industrially sponsored scholarship programs.

Sponsors are becoming increasingly aware of the possibility of improving personnel and public relations by offering scholarships to their constituents. Corporations establish scholarships for children of employees or graduates of local secondary schools, while labor and civic groups offer aid to children of their members or to promising youth in the communities where



Arthur L. Benson, Director of Scholarship Programs at Educational Testing Service for the past four years, recently turned that office over to Wesley W. Walton in order to devote full time to his duties as Director of Teacher Examinations. Mr. Benson came to ETS with a background in research, testing, and guidance which began with seven years of teaching and counseling at Easton (Maryland)

High School and included service as a psychological research assistant with the Air Force and as a guidance specialist with the Maryland Department of Education and the United States Office of Education. Each of the 50 scholarship programs which Mr. Benson discusses in this article is described by him in the Board's *College Handbook*.



they are active. Continuing shortages of trained personnel, too, are leading sponsors to set up programs as a long-range recruitment aid which informs youth about occupational opportunities and aids those who want to grasp them. A growing awareness of the financial needs of colleges has also supported the trend as industry, labor, and civic and service organizations have acknowledged the contributions colleges make to the advancement of their respective interests. Consequently, many scholarship sponsors feel that their programs serve, in part, to repay the colleges, not only for research and study which have profitable and productive application, but also for training of valued personnel who were probably educated at a financial loss to the colleges they attended. Some sponsors point out, moreover, that scholarships are one means of promoting the pursuit of knowledge by providing colleges with unencumbered support. Aid from governmental or other sources, they think, might possibly be so unpredictable or so restrictive in application as to render independent long-range planning by the colleges virtually impossible.

Another important factor in the growth of sponsor interest among corporations is the relatively small cost of scholarship programs which are organized to take advantage of the five per cent tax exemption provision of the Internal Revenue Code. This usually involves the creation of a foundation fund or trust. For many corporations, scholarships may be granted at a net cost of 18 cents for each dollar of aid. The cost to stockholders is proportionately smaller, depending on the individual income bracket. A comprehensive statement on tax aspects of scholarship programs is contained in *The Manual of Corporate Giving*, published by the National Planning Association, Washington 6, D. C. Several favorable court rulings have been made since its appearance early in 1952. Thomas R. Mullen, president of the Lehigh Structural Steel Company, Allentown, Pennsylvania, for many years an enthusiastic spokesman for corporate philanthropy, has published and distributed at

his own expense an informative brochure which explains how to organize a foundation.

Finally, within the past few years, the colleges themselves have taken action to make it easier for potential donors to assist them. For many scholarship programs, the detailed disbursement of awards is handled by the colleges which the winners attend. In some states, a number of colleges cooperatively seek financial assistance in such a way as to avoid direct competition among themselves and embarrassment to individual donors who may be reluctant



*Scholarships provide unencumbered support*

to offer either a small contribution to each college or substantial assistance to any one college. The Ohio Foundation of Independent Colleges, Inc., is an illustration of this kind of intercollegiate cooperation. Furthermore, the establishment of the Council for Financial Aid to Education, 6 East 45th Street, New York, New York, as a clearing-house for both potential donors and colleges provides an avenue of much broader scope than has been previously available.

In some programs the ratio between the number of competitors and the number of awards available is extremely high. For the past several years there have been approximately 2,500 applicants for the eight scholarships offered by the Knights of Columbus, New York State Council. In the American Baptist Student Aid Fund scholarship competition there are approximately 1,000 applicants each year for the 50 scholarships awarded. In both programs, the ratio is sufficiently high to warrant the use of

a two-stage selection-testing procedure. All candidates first take a reliable, but relatively short, general scholastic aptitude test. On the basis of this screening examination, a relatively small group is selected to take a more comprehensive program of College Board examinations which are used in the final choice of scholarship winners. The two-stage method commonly results in substantial lowering of selection costs for either the applicants or the sponsor, and not infrequently, for both.

The College Board policy of restricting the use of its examination scores to persons qualified to interpret them with professional competence has assured that the final selection of scholarship winners is conducted by sponsors using the tests on a highly professional and ethical basis. Nearly all of them turn responsibility for the final choice of winners over to a scholarship committee composed in whole or in part of educators. In a substantial proportion of the programs, the final naming of the candidates to whom awards are made is accomplished by a committee of college admissions officials who function with complete freedom of choice within published general policies determined by the sponsor.

In addition to obtaining professional advice on technical questions, a number of sponsors have established advisory committees to aid in program planning and policy determination. These committees, customarily, are broadly representative of all aspects of the program, and may include such groups as parents, high school and college officials, agencies which serve youth, management, and labor. Cooperation of the high schools is frequently assured, especially in regional or nationwide programs, through coordination of the recruitment and selection procedures with the national contest committee of the National Association of Secondary School Principals.

#### SPECIAL SELECTION AIDS

Most sponsors provide their selection committees with special aids in the final selection of

winners. The Ford Motor Company Fund furnishes its scholarship board with comprehensive files on each applicant, arranged in descending order of a composite score derived by the statistical combination of the College Board Scholastic Aptitude Test results with high school rank-in-class. The American Institute of Steel Construction includes in its composite index of scholarship promise not only Board test results and high school performance, but also an evaluation of the candidate's out-of-school activities, personal qualifications, evident financial need, and status as a company employee.

#### RECENT AWARDS HIGH

While the values of scholarship grants vary widely, and some programs award scholarships of varying sizes, there has been a tendency for programs initiated in recent years to set substantial amounts. In many cases the awards are large enough to cover tuition, books and fees, and most living expenses. Those offered to young seamen, or the children of seamen, by the Welfare Plan of the Atlantic and Gulf District of the Seafarer's International Union, AFL, are worth \$1,500 annually to the recipient. So long as the winner maintains satisfactory academic standing, he receives the award each year until he completes the number of years normally required for his educational program, which for some professions may stretch over a period of six or seven years. Ford Motor Company Fund scholarship holders receive full tuition and customary fees, as well as the major portion of the living expenses at their colleges. Recipients of the scholarships offered to children of Local 32-B members of the Building Service Employees International Union, AFL, are awarded \$1,200 per year for the normal four-year period required to complete work for the Bachelor's degree.

Special provisions of some scholarship programs indicate a growing recognition on the part of industrial, labor, and civic and service organizations that they have a stake in the improvement and expansion of higher education

facilities available to youth. Outright grants-in-aid by the sponsor to the colleges selected by the scholarship winners are beginning to be a fairly common element in newly organized programs. A number of programs having this feature point out that by making the grants to the colleges selected on the basis of the scholarship winners' individual free choice, they are supporting the traditions and influences which historically have encouraged young people to attend some institutions rather than others. In addition, this frees the sponsor from direct responsibility for selecting certain colleges to support or for devoting the total resources available to the promotion of certain patterns or programs of higher education. The American Can Company and the Ford Motor Company Fund contribute to each approved, privately-controlled four-year college in the United States which is attended by one of their scholarship winners an annual grant of \$500 for each scholar in attendance. The Bulova Watch Company and the Maytag Company Foundation, Inc., both make annual \$500 grants-in-aid to accredited colleges attended by their winners.

#### VARIETY OF SPONSORS

There is great variety in the auspices through which scholarship programs are organized. Some industrial sponsors have organized their programs through foundations or institutes which serve the industry as a whole, such as the New England Textile Foundation. Others which offer scholarships on an individual company basis include the Continental Can Company, the Pennsylvania Railroad Company, and the Western Union Telegraph Company. Labor union interest extends from national programs such as the National Association of Master Plumbers' competition for training in phases of engineering applicable to the plumbing and heating industry to such local union awards as the Philip Murray Memorial Scholarships (Utility Workers Union of America, CIO, Local 1-2), and the Electrical Industry Employees Union Scholarships (International Union of

Electrical, Radio, and Machine Workers, CIO, Local 201). The wide range of civic and service organizations supporting scholarships is indicated by the awards offered to outstanding youths of Portuguese extraction who reside in Massachusetts (Portuguese-American Civic League of Massachusetts), New York City High School graduates who need financial assistance to attend college (Grand Street Boys Foundation), and girls immediately related to the members of the Ahepa Senior Ladies Auxiliary (Daughters of Penelope Scholarships).

Almost all programs using College Board tests make awards only for use in accredited colleges which offer the Bachelor's degree as distinguished from institutions which provide comparatively brief vocational training. There are, however, differences between programs in the latitude permitted scholarship winners in selecting a college. For the most part, restrictions on the kind and location of the institution, or the types of educational programs which winners may choose are affected to a large degree by the purposes the sponsor is endeavoring to achieve through its program.

Winners of the Weyerhaeuser Timber Foundation Scholarships may attend any approved college or university as candidates for a Bache-



*Schools help in recruitment and selection*

lor's degree in liberal arts or sciences, or such other fields as may be approved by the foundation. Pulitzer Free Scholarship holders also are allowed a wide choice, but successful competitors who decide to attend Columbia receive free tuition in Columbia College in addition to the regular award. Catholic Daughters of America scholars are restricted to fully accredited Catholic colleges, while Ralph E. Taggart Memorial Scholarships (The Philadelphia and Reading Coal and Iron Company) are offered for the mining schools of Lehigh University, Lafayette College, or Pennsylvania State College. In some instances, the awards are for attendance at a specific college or for pursuance of a particular program of studies, such as the George Westinghouse Scholarships (Westinghouse Electric Corporation) which assist young men to study engineering, chemistry, physics, or industrial management at the Carnegie Institute of Technology.

The purposes of the sponsor and the needs of eligible candidates are sometimes best served by limiting applicants to students from a given locality or state rather than by conducting a national competition. Most of the larger programs, however, are regional or national in scope, and at least one which uses College Board tests has international coverage because the sponsor, the American Can Company, wished to give the children of employees at its Canadian installations equal opportunities. Other scholarships of nationwide scope include the George B. Beitzel Scholarship (Pennsylvania Salt Manufacturing Company), the General Henry H. Arnold Educational Fund Scholarships (Air Force Aid Society), and the J. W. VanDyke Foundation Scholarships (The Atlantic Refining Company and its affiliated companies).

An example of a regional program is the Seven College Conference Scholarships, sponsored cooperatively by seven eastern women's colleges for exceptional girls graduating from high schools in 11 states west of the Mississippi River. State programs include those established

in Colorado by the Boettcher Foundation and in Ohio by the Standard Oil Company of Ohio. Typical of local scholarship opportunities are the awards offered boys belonging to the Police Athletic League of Philadelphia (the Christian Schmidt Scholarships), the Walter S. Barr Scholarships for prospective college students living in the Springfield, Massachusetts, area, and the Mayor's Free Scholarships for deserving graduates of Philadelphia High Schools.

Those persons at the Educational Testing Service who have been most intimately concerned with advising scholarship sponsors on the 50 programs which use College Board tests know that scholarships pave no path to painless philanthropy. They do contend, however, that rich experience in dealing with a wide variety of programs and sponsors reveals few operational problems which are currently insurmountable. Many questions to which there were no tested answers a few years ago can now be handled routinely with predictably favorable results.

#### IS IT A CURE-ALL?

Do scholarship programs hold promise for solving all the personnel and public relations, tax, and recruitment problems for industry, labor, civic and service organizations on the one hand, and all the financial and enrollment problems of the colleges on the other? On the basis of their close relationships with all of these groups, those people at Educational Testing Service who have worked with the sponsors say, "No!" They feel confident, nevertheless, that they are accurately reflecting the attitudes of the preponderance of scholarship sponsors in saying that such programs can have a profound effect on all these problems.

Furthermore, no sponsor who takes an active hand in organizing and operating a scholarship program can long remain immune to the morale-building satisfactions which come in recognizing that it is helping a great American dream to come true—to give every child an equal opportunity to develop his talents.



## 103 Colleges to Use May 19 Candidates Reply Date

The 103 colleges listed on this page have notified the College Board that they will observe May 19 as this year's Candidates Reply Date.

In subscribing to the date the colleges have agreed that they will not require any candidate admitted as a freshman to give notice before May 19 of his decision to attend one of the institutions or to accept financial aid from it.

The effect of the agreement, as in previous years when it was known as the Uniform Acceptance Date, is to give the applicant maximum opportunity to receive and consider all

acceptances before selecting a college. The admitted candidate may, of course, make a choice before the Candidates Reply Date, and is encouraged in that event to notify the institution as soon as the decision is made.

The date, which is to be set each year by the College Board, will be no earlier than 30 days after scores of the Achievement Tests taken in March are reported to colleges. This will enable participating colleges to process applications and issue notifications of admission in advance of the reply date.

### Participating Colleges\*

Adelphi College  
Albertus Magnus College  
Antioch College  
Bard College  
Barnard College  
Beaver College  
Bennington College  
Boston University  
Brown University  
Bryn Mawr College  
Caldwell College  
California Institute of Technology  
Carleton College  
Catholic University of America  
Cedar Crest College  
Chestnut Hill College  
Claremont Men's College  
Clark University  
College of New Rochelle\*\*  
College of Notre Dame of Maryland  
College of William and Mary  
Columbia College  
Connecticut College  
Cornell University  
Dartmouth College  
Denison University  
DePauw University

Drew University  
Duke University\*\*  
Dunbarton College of Holy Cross  
Elmira College\*\*  
Emmanuel College  
Fordham College  
Georgian Court College\*\*  
Gettysburg College  
Goucher College  
Harvard College  
Haverford College  
Hobart and William Smith Colleges  
Hollins College  
Hood College  
Immaculata College  
Jackson College  
Knox College  
Lake Forest College  
Lewis and Clark College  
Manhattan College  
Manhattanville College of the Sacred Heart  
Marymount College  
Marywood College\*\*  
Massachusetts Institute of Technology  
McGill University  
Mills College  
Mount Holyoke College

New Jersey College for Women  
Newcomb College of Tulane University  
Northwestern University  
Occidental College  
Pembroke College  
Pennsylvania College for Women  
Pomona College  
Princeton University  
Providence College  
Radcliffe College  
Randolph-Macon Woman's College  
Reed College  
Regis College  
Rensselaer Polytechnic Institute  
Rosemont College\*\*  
Russell Sage College  
Rutgers University  
St. Joseph's College for Women  
Scripps College  
Seton Hill College  
Simmons College  
Skidmore College  
Smith College  
Stanford University  
Swarthmore College

Sweet Briar College  
Syracuse University  
Trinity College, Washington, D.C.  
Tufts College  
University of Chicago  
University of Colorado  
University of Michigan  
University of Pennsylvania  
University of Redlands  
University of Rochester\*\*  
University of the South\*\*  
University of Virginia  
Ursinus College  
Vassar College  
Wagner College  
Washington and Lee University  
Wellesley College  
Wells College  
Western Reserve University  
Wheaton College  
Whitman College  
Whittier College  
Wilson College  
Yale University

\*As of February 10, 1954.

\*\*With the exception of scholarship candidates.



-  
e  
-  
n  
e  
s  
n  
e  
s  
e

,  
y

ol-